

ABSTRACT

A multi-carrier communication apparatus and a multi-carrier communication method, wherein in a radio communication that performs multi-antenna transmission, a transmission peak power is suppressed without inducing nonlinear distortion and without decreasing transmission efficiency. Based on control information outputted from an exchange pattern decision section (190), a data exchange section (120) exchanges data, which are arranged on subcarriers of each group, between data streams in units of groups of subcarriers. Power measurement sections (160-1 to n) each measure powers of OFDM symbols in each data stream and compare them with a predetermined threshold and as a result of comparison, when the power of the OFDM symbol is greater than the predetermined threshold, the measurement sections each output power measurement results to an exchange pattern decision section (190). The exchange pattern decision section (190) decides an exchange pattern for exchanging data in the data stream of which the measured power is greater than the predetermined threshold, and outputs it as control information to the data exchange section (120).